CABINET FOR HEALTH SERVICES
COMMONWEALTH OF KENTUCKY
275 EAST MAIN STREET, HS 2 E-D
FRANKFORT, KY 40621-0001

DEPARTMENT FOR PUBLIC HEALTH

RADIATION HEALTH & TOXIC AGENTS BRANCH

QUALIFICATIONS FOR "QUALIFIED EXPERT" (MEDICAL PHYSICS)

Radiological Health is a broad field which demands that safety evaluations and/or procedures be performed only by specifically trained experienced professionals. The specific categories are:

A. Shielding design for radiation therapy (T) and diagnostic x-ray (D) facilities.

B. Leak testing of sealed radiation sources and evaluation of radioactive material.

C. Calibration of therapeutic x-ray units.

D. Calibration of teletherapy units.

E. Calibration of health physics instrumentation, primarily portable instrumentation.

F. General radiation safety surveys and broad health physics services.

G. Conducting Mammography Facility Surveys and provide oversight of the quality assurance program.

GENERAL QUALIFICATIONS:

Individuals must meet the definition of a "qualified expert" as defined in NCRP Report No. 49.

Qualified Expert:

"With reference to radiation protection, a person having the knowledge and training to advise regarding radiation protection needs, to measure ionizing radiation, and to evaluate safety techniques (for example, persons having relevant certification from the American Board of Radiology or American Board of Health Physics, or those having equivalent qualifications) with reference to shielding design, a person having particular knowledge and training in the field of medical x-ray and gamma-ray shielding."

The requirements for eligibility for certification by the American Board of Health Physics are:

1. A Bachelor's degree in a physical science or a biological science with a minor in physical science.

2. A minimum of six (6) years of responsible professional experience in health physics, three (3) years of which must be in applied radiation protection work. Additional education may be substituted for experience to a maximum of two and one-half (2.5) years. Such allowance will be made according to the following:

Type of Study or Degree	Years of Study Experience	Equivalent Credit
General – related to HP	1	½
General – related to HP	2 or M.S.	2
General – related to HP	Ph.D.	2
Health Physics	1	1
Health Physics	2 or M.S.	1½
Health Physics	Ph.D. or Sc.D.	2 ½

3. The individual must be engaged in the professional practice of health physics a substantial portion of their time.

The requirements for eligibility for certification by the American Board of Radiology in Radiological Physics are:

1. A degree of Masters of Science, Masters of Arts, or a higher degree in an appropriate field. Appropriate fields are: radiological physics, biophysics, physics, health physics, and public health when the Bachelor's degree is in a physical field.

2. Some training in the biological field.

3. At least two (2) years full-time association with an approved department of radiology.

4. Shows evidence of having performed a sufficient number of calibrations of therapy apparatus, performed protection surveys, and protection design studies.

CATEGORY REQUIREMENTS:

A. **SHIELDING DESIGN FOR RADIATION THERAPY AND DIAGNOSTIC X-RAY FACILITIES. GENERAL HEALTH PHYSICS SERVICES AND SURVEYS.** Must present proof of particular knowledge and training in the field of medical x-ray and gamma-ray shielding. Before an individual may independently perform shielding design they shall satisfactorily complete three shielding designs under the direct supervision of a qualified expert. These designs shall be completed in

the particular area of service for which privileges are being requested (i.e., three diagnostic and/or three therapy).

B. **LEAKAGE TESTING OF SEALED RADIOACTIVE SOURCES AND EVALUATION OF RADIOACTIVE MATERIALS.**
These individuals shall be licensed by the Cabinet, the NRC, or other Agreement State to perform this service. The training and experience required are necessary to obtain the license.

C. **CALIBRATE X-RAY THERAPY.**
These individuals must meet the definition of a "Qualified Expert" as defined in Section A above. In addition, the individual must have had training and experience in the clinical applications of radiation physics in radiation therapy.

D. **CALIBRATE TELETHERAPY EQUIPMENT.**
Minimum requirements for Qualified Expert for Teletherapy Calibrations (902 KAR 100:017, Section 17) are as follows:

A licensee shall determine if a person is an expert qualified by training and experience to calibrate a teletherapy unit and establish procedures for reviewing the results of spot check measures. The licensee shall require the qualified expert to:

(1) Be certified by the American Board of Radiology in: (a) therapeutic radiological physics: (b) roentgen-ray and gamma-ray physics; (c) x-ray and radium physics; or (d) radiological physics; or

(2) Hold a master's or doctorate degree in physics, biophysics, radiological physics or health physics; and have completed one (1) year of full-time training in therapeutic radiological physics; and also one (1) year of full-time experience under the supervision of a teletherapy physicist at a medical institution.

Licensees who wish to have their teletherapy units calibrated by persons who do not meet the above criteria for minimum education and experience may request a license amendment exempting them from the requirements of this section. The request shall include the name of the proposed qualified expert, a description of his training and experience including information similar to that specified in item 2 above, reports of at least one (1) calibration and spot-check program based on measurements personally made by the proposed expert within the last ten (10) years.

E. **CALIBRATION OF HEALTH PHYSICS INSTRUMENTATION.**
The individual must calibrate against a traceable radiation source. If this source is a radioactive material source, the individual must be licensed by the Cabinet, the NRC, or other Agreement State to use the radioactive material. If the source is an x-ray source, the individual must submit the procedures for approval by the Cabinet.

F. **GENERAL RADIATION SAFETY SURVEYS AND BROAD HEALTH PHYSICS SERVICES.**
The individual must present documentation of education and/or experience in performing radiation safety surveys, internal dosimetry, bioassay, environmental sampling and analysis of radioactive waste management.

G. **MAMMOGRAPHY FACILITY SURVEYS AND QUALITY ASSURANCE OVERSIGHT.**
Initial qualifications in accordance with 21 CFR Part 900 (Section 900.12(a)(3)(i)).

(A) Be State licensed or approved or have certification in an appropriate specialty area by one of the bodies determined by FDA to have procedures and requirements to ensure that medical physicists certified by the body arc competent to perform physics survey; and

(B)(1) Have a masters degree or higher in a physical science from an accredited institution, with no less than 20 semester hours or equivalent (e.g., 30 quarter hours) of college undergraduate or graduate level physics;

(2) Have 20 contact hours of documented specialized training in conducting surveys of mammography facilities; and

(3) Have the experience of conducting surveys of at least 1 mammography facility and a total of at least 10 mammography units. No more than one survey of a specific unit within a period of 60 days can be counted towards the total mammography unit survey requirement. After April 28, 1999 experience conducting surveys must be acquired under the direct supervision of a medical physicist who meets all the requirements of paragraphs (a)(3)(i) and (a)(3)(iii) of this section.

ALTERNATIVE QUALIFICATIONS FOR MAMMOGRAPHY:

A. Have qualified as a medical physicist under the interim Food and Drug Administration (FDA) and Mammography Quality Standards Act (MQSA) federal regulations and maintained the active status of any qualifying license, approval, or certification required under the interim regulations.

(1) A bachelor's degree or higher in a physical science from an accredited institution with no less than ten (10) semester hours or equivalent of college level physics;

(2) Forty contact hours of documented specialized training in conducting surveys of mammography facilities; and

(3) The experience of conducting surveys of at least ten (10) mammography facilities and a total of at least 20 mammography units. The training and experience requirements must be met after fulfilling the degree requirement.

CONTINUING QUALIFICATIONS:

A. Continuing Education: At all times after the third anniversary of the completion of the initial requirements, the medical physicist shall have taught or completed at least fifteen (15) continuing education units in mammography over the preceding three (3) years. This continuing education shall include training appropriate to each mammography modality evaluated by the medical physicist during oversight of the quality assurance program.

B. Continuing Experience: At all times after the anniversary of completion of the initial requirements the medical physicist shall have surveyed at least three (3) mammography facilities within the preceding 12 months.

The qualifications listed above as well as additional qualifications pertaining to mammography (i.e., independent performance), reestablishing qualifications and failure to meet standards are subject to change per FDA regulatory requirements.

SUBMITTALS:

Persons wishing to act as radiation physics consultants in the Commonwealth of Kentucky must meet the above criteria for the referenced procedures and services. A letter of consideration stating the type of services you desire to perform along with the following; applicable credentials, resume, C.V. and attestations must be submitted at the address below for approval.

Radiation Health & Toxic Agents Branch
Cabinet For Health Services
275 East Main Street, HS 2E-D
Frankfort, KY 40621

Phone: (502) 564-3700 ext. 3695

Following a review of the qualifications, a letter or certificate granting privileges will be sent to the qualified expert.